APPENDIX B
CLEAN VERSION WITHOUT MARKINGS TO SHOW CHANGES MADE IN CLAIMS

Please substitute claims 1-2, 4-6, 11, 13, and 15 and add claims 50-58 as follows:

1. (Amended) A sensor having a transistor with a gate located partially over a source and partially over a drain, comprising:

a well region formed beneath the source such that a portion of the well region extends partially beneath the gate;

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a material disposed between the well region and the drain beneath the gate, the material having a predetermined length; and

a detection device coupled to the drain by a signal path, wherein the material allows the detection device to be reset to a predetermined state.

2. (Amended) The sensor of claim 1, further including an implant in the material that increases a surface threshold of the transistor.

4. (Amended) The sensor of claim 2, wherein the implant is formed to extend between the well region and the drain.

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5. (Amended) The sensor of claim 3, wherein the implant has a dopant concentration that is less than the well region.

6. (Amended) The sensor of claim 2, wherein the implant is a shallow boron implant.

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11. (Amended) The sensor of claim 10, wherein the gate has a predetermined length that is approximately two times a process minimum.

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13. (Amended) The sensor of claim 12, wherein the material corresponds to a portion of a p-type substrate that is in proximity to the p-type region of the gate and the portion of the well region extends beneath the n-type region of the gate.

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15. (Amended) The sensor of claim 10, including an implant region located in the drain extending under the p-type region of the gate such that the drain is not in direct contact with the gate.

50. (New) A sensor having a transistor with a gate located partially over a source and partially over a drain formed in a substrate, comprising:

a well region formed to contain one of the source and the drain such that a portion of the well region extends partially beneath the gate;

an implant formed in the substrate to extend between the well region and the other of the source and the drain such that the implant increases a surface threshold of the transistor; and

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a detection device coupled to the drain by a signal path, wherein the implant allows the detection device to be reset to a predetermined state when a voltage that is greater than or equal to the surface threshold of the transistor is present on the gate.

51. (New) The sensor of claim 50, wherein the surface threshold of the transistor is increased to at least 0.8 volts.

52. (New) The sensor of claim 50, wherein the gate has a predetermined length and the implant extends approximately a half of the predetermined length of the gate.

53. (New) The sensor of claim 52, wherein the predetermined length of the gate is at least 20 percent greater than a process minimum.

54. (New) The sensor of claim 52, wherein the predetermined length of the gate is approximately two times a process minimum.

55. (New) A sensor, comprising:

a transistor having a source, a drain, and a gate located partially over the source and partially over the drain, the gate having a p-type region and a n-type region;

a well region formed to contain one of the source and the drain and to extend partially beneath the gate such that the well region extends a length of one of the n-type and the p-type gate regions; and

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a detection device coupled to the drain by a signal path.

56. (New) The sensor of claim 55, wherein the gate has a predetermined length that is approximately two times a process minimum.

57. (New) The sensor of claim 55, wherein the well region is a p-type material and the well region extends the length of the n-type gate region.

58. (New) The sensor of claim 57, further comprising an implant region located in the drain extending under the p-type region of the gate such that the drain is not in direct contact with the gate.